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State of Utah
DEPARTMENT OF NATURAL RESOURCES
MICHAEL R. STYLER
Executive Director
Division of Water Rights
KENT L. JONES
State Engineer/Division Director

August 5, 2010

Ivan Cowley, Chairman
Sevier River Distribution System
85 West Center
Venice UT 84701

Re: Management of Sevier River Automation & Telemetry System

Dear Ivan:

The Sevier River Distribution System has been involved in an effort to automate both water measurement and head gate control for over 20 years. During that time we have seen great improvements in the ability to better manage the water distribution and to gather a better record of the water diversions. I have heard estimates that the automation has increased the water available to the water users by a significant percentage (I have heard ranges from 15% to 25%).

I believe without question the water users see the benefits that have come through the automation effort; as a result the committee is continuing its program to install automation throughout the distribution system. This effort is to be commended. I don't believe there are any water users who would desire to go back to the previous method of distributing water. Nor do I think it actually would be possible to go back to the old system; regulation and distribution on the Sevier River has become increasingly dependent on automation.

However, during all of this evolution of the automation system, I don't think there has been a discussion between the Sevier River Distribution System Board and the Division of Water Rights regarding what the water commissioners' role should be in regards to the system:

- What responsibilities they should have in operating and maintaining the system;
- How they should use the automation tools to regulate and distribute water;
- How automated data should be collected and reported; and
- What standards should be used to determine accuracy of the automated data; etc.

The commissioners' relationship to the automation system appears to have evolved without the benefit of clear guidelines from either the Division or the Board. As a result, it may be that the automation system and the water commissioners' efforts are not being utilized to their best effectiveness. The Distribution System would benefit if these issues, and perhaps other related expectations placed on the commissioners, could be discussed and clarified.

Since regulation on the Sevier River has become dependent upon the automation system, its long-term sustainability and the coordination of the data gathering and record keeping is a concern of the State Engineer.

1594 West North Temple, Suite 220, PO Box 146300, Salt Lake City, UT 84114-6300
telephone (801) 538-7240 • facsimile (801) 538-7467 • TTY (801) 538-7458 • *www.waterrights.utah.gov*

It seems there is some perception that installation of automation equipment should reduce the amount of effort required by the water commissioner. However, if the commissioner is responsible for operation and maintenance of the automation, just the opposite is the case. Even with automation, there is still a need for the commissioner to determine the water (flow and/or storage) available for regulation, regulate the distribution of water, check the accuracy of the measuring devices, maintain reports on the distribution of water, etc. Automation does improve the accuracy and efficiency of distribution and regulation but it does not reduce the effort. When maintenance (and installation) of automation equipment is added to a commissioner's responsibilities, the effort required of a commissioner is actually substantially increased.

In addition to the topics indicated above, there are several other fairly basic questions I believe we should discuss related to the water commissioners and the automation system.

- What is necessary to operate and maintain the automation system?
  - Technical competency to troubleshoot and resolve problems with the system equipment: electrical, mechanical, communications, etc.
  - Long term management planning to prepare for and meet upcoming needs and the long-term sustainability of the system.
- Do the commissioners have the necessary technical competence and management capability? What training is necessary to develop these abilities? Do the commissioners have the motivation and desire to undertake the training and develop these necessary capabilities?
- If the water commissioners are to operate and maintain the system, are they being compensated adequately?

In 1994, before much automation was introduced into the distribution system, the water commissioners' annual salary was $25,824. Adjusting for inflation (based on the consumer price index), that salary amount today would be $38,877. The commissioners' salary is $38,990. It appears the salary increases for the commissioners have kept pace with inflation, but there has been no consideration for any increased effort or responsibility to operate and maintain the automation system.

The Duchesne River is the only other distribution system in the state where the water commissioner has operation and maintenance responsibilities for the automation system. The Duchesne River automation system is comparable in size and complexity to each half of the Sevier River automation system, so a comparison with that system is meaningful.

The Duchesne River water commissioner operates and maintains an automated data gathering and gate operation system that includes:

- 18 stations with automated measurement and automated gate controls
- 30 stations with automated measurement only
- 10 repeater stations

By comparison, the automated data gathering and gate operation system the water commissioners on the Sevier River are responsible for includes the following:

UPPER SEVIER:

- 12 stations with automated measurement and automated gate controls
- 18 stations with automated measurement only
- 4 repeater stations
- 6 stations - operating inside irrigation companies' systems for which he has provided assistance to the company with maintenance and troubleshooting
- USBR plans to add 4 new stations

LOWER SEVIER:

- 14 stations with automated measurements and automated gate controls
- 11 stations with automated measurement only
- 1 repeater station
- USBR plans to add automated gate controls at 4 locations
- USBR plans to add automated measurement at 6 locations

The Duchesne commissioner's salary is $54,600 compared to the Sevier River commissioners' salary of $38,990, a difference of $15,610.

- The other question that should be discussed is whether there are alternatives to having the commissioners operate and maintain the equipment.

As I indicated, the Duchesne River automation system is the only other system in the state that is similar to the Sevier River System in the operation and management of its automated water measurement and gate operation system. In every other distribution system, where automation has been implemented, the effort has not been sponsored by the distribution system itself but by a conservancy district or a water users association organized separately from the distribution system.

On these other systems, the water commissioner is not responsible for maintaining the automation equipment, but uses the data in his regulation and distribution activities. These agencies have developed a technically trained in-house support staff that operate and maintain the automation system equipment.

Is there is enough operation and maintenance work involved with the Sevier River automation system equipment to justify the distribution system hiring a staff person with adequate technical capability dedicated to that responsibility? Developing in-house staff capability would provide a measure of control over the costs involved and the long term-planning efforts.

Another option might be to hire a consulting firm to take over operation and maintenance of the automated system. However, the challenges associated with that option might include: reduced availability to resolve urgent or emergency needs; less control over costs; and less control or involvement in long-term planning.

I think it would be very helpful if we could meet with the committee this fall, prior to the annual distribution meeting, to discuss these issues. I will get in touch with you in September to schedule a meeting.

To assist us in our discussion, in a separate letter I have requested the water commissioners to report back to me and help me understand how the requirements of the water commissioner position have changed over the past 10-15 years since automation has become prevalent in the distribution system and how they spend their time and effort now as water commissioners. I would like to understand the tasks they do throughout a regulation season, how much time and effort required by each task, and which tasks are additional effort that is now required as a result of the installation of the automation system.

If you have any questions or comments concerning these issues that you would like to discuss with me prior to the meeting, please contact me at 801-538-7380 or by e-mail at LeeSim@utah.gov.

Sincerely,

Lee H. Sim, P.E.
Assistant State Engineer for Field Services

cc:

Kirk Forbush
Jim Walker
Ray Owens
Travis Blood
Blaine Ipson
Jarvis Sorenson
Russ Christensen
Russ Anderson
Ken Fowls
Delin Roundy